

PATENT
GNJ7036165001REMARKSI. Claim Rejections under 35 U.S.C. § 112

Claims 17-52 stand rejected under 35 U.S.C. § 112 as allegedly failing to comply with the written description requirement. Claims 36-52 have been canceled. With respect to claims 17 and 23, Applicant respectfully directs the Examiner's attention to page 15, lines 18-21 of the application, which discloses amplitude difference in relation to head shadowing effect, and page 15, lines 5-14, which discusses beamforming technique based on head shadowing effect to optimize signal-to-noise ratio, and adjusting amplitudes. Beamforming technique for adjusting signals is also discussed throughout the specification. For at least the foregoing reason, Applicant respectfully requests that the § 112 rejection be withdrawn.

II. Claim Rejections under 35 U.S.C. §102

Claims 17, 19-21, 23, 25-27, 36, 46, and 47 stand rejected under 35 U.S.C. §102(b), as being anticipated by the publication "Microphone-Array Hearing Aids with Binaural Output – Part II: A Two-Microphone Adaptive System," by Daniel P. Welker ("Welker"). Applicant respectfully notes that in order to sustain a claim rejection under § 102, each of the claimed elements must be disclosed, either expressly or inherently, in the cited reference.

Claim 17 recites determining a difference between amplitudes of signals respectively produced by the first and second sensors, and adjusting the amplitudes of the signals based on the determined amplitude difference to produce adjusted signals. Claim 23 recites similar limitations. Welker does not disclose or suggest the above limitations. Welker discloses a microphone system, wherein signals from right and left microphones, f_R and f_L , respectively, are adjusted (See figure 2). Notably, in the top line of figure 2, signal f_L is added to signal f_R , and in the bottom line, signal f_L is subtracted from signal f_R . As such, Welker does not disclose or suggest adjusting amplitudes of

PATENT
GNJ7036165001

signals (e.g., both left and right signals) based on a determined amplitude difference (i.e., the same amplitude difference). For at least the foregoing reasons, claims 17 and 23, and their respective dependent claims, are believed allowable over Welker.

III. Claim Rejections under 35 U.S.C. §103

Claims 17, 18, 23, 24, 36, 42-45, and 49-52 stand rejected under 35 U.S.C. §103 as being obvious over U.S. Patent No. 6,697,494, issued to Klootsema et al. ("Klootsema").

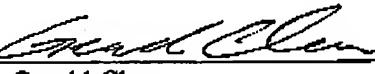
Claim 17 recites determining a difference between amplitudes of signals respectively produced by the first and second sensors, and adjusting the amplitudes of the signals based on the determined amplitude difference to produce adjusted signals. Claim 23 recites similar limitations. Applicant agrees with the Examiner that Klootsema does not disclose or suggest determining an amplitude difference. According to the Office Action, it would have been allegedly obvious to modify Klootsema by determining an amplitude difference so that the signals may be adjusted. Applicant respectfully disagrees. Klootsema discloses matching the levels of microphone signals, and does not disclose or suggest determining an amplitude difference, and adjusting signals based on the same determined amplitude difference. Also, just because matching of signals is disclosed, it does not necessitate a finding that the matched signals are determined based on an amplitude difference. As the Examiner correctly pointed out, there are different techniques that can be used to match signals. For example, two signals may be matched by adding the two signals and taking an average, in which case, there will be no need to determine an amplitude difference. For at least the foregoing reasons, Applicant respectfully requests that the § 103 rejection based on Klootsema be withdrawn.

PATENT
GNJ7036165001CONCLUSION

Based on the foregoing, it is believed that all remaining claims are allowable and a Notice of Allowance is respectfully requested. If the Examiner has any questions or comments regarding this amendment, the Examiner is respectfully requested to contact the undersigned.

DATE: February 28, 2006

Respectfully submitted,

By: 
Gerald Chan
Registration No. 51,541

Bingham McCutchen LLP
Three Embarcadero Center, Suite 1800
San Francisco, California 94111
Telephone: (650) 849-4960
Facsimile: (650) 849-4800